UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,157	09/19/2003	Mutsumi Katayama	HGM-108-A	8732

21828 7590 01/16/2007

CARRIER BLACKMAN AND ASSOCIATES
24101 NOVI ROAD
SUITE 100
NOVI, MI 48375

EXAMINER	
NGUYEN, TUAN HOANG	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,157	KATAYAMA ET AL.	
	Examiner	Art Unit	
	Tuan H. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 10/27/2006 with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Specification

2. The amendment filed on 10/27/2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: on the specification, Paragraph [0044] applicant amended to add the following limitation "As will be understood from the foregoing, the network functions independent of a host in that the BT modules perform cable communication irrespective of which is master/slave".

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims 1 and 14-16 are not properly described in the application as filed, and the specification was not contain a written description "the first piconet and the other piconet structure a network, said network being configured to function independent of a host". Therefore, the amendment of the claimed raise an issue of new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8, 10-21, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lempio et al. (US PAT. 6,831,896 hereinafter, "Lempio") in view of Hlasny (U.S PUB. 2006/0129679).

Consider claim 1, Lempio teaches a wireless network system for use with two vehicles, system comprising: a first relay device (see fig. 1 item 14a1) including first (see fig. 2A item 30a) and second (see fig. 2A item 30b) Bluetooth modules, each of the first and second Bluetooth modules capable of performing a cable communication irrespective of which is a master or slave, wherein said relay device is configured to be mounted to a first mobile aparatus (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one first wireless terminal (see fig. 2B item 14) including a third Bluetooth module, wherein the first and third Bluetooth modules structure a first piconet in which the first Bluetooth module is a master, and the third Bluetooth module is a slave (col. 4 lines 19-24), the second Bluetooth module structures a second piconet (see fig. 1 item 20a and col. 4 lines 33-50).

Lempio does not explicitly show that the first piconet and the second piconet structure a network, said network being configured to function independent of a host.

In the same field of endeavor, Hlasny teaches the first piconet and the second piconet structure a network, said network being configured to function independent of a host (page 3 [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the first piconet and the second piconet structure a

network, said network being configured to function independent of a host, as taught by Hlasny, in order to provide an electronic device is disclosed that is adapted to communicate with a first device network and to communicate with a second device that is part of a second device network.

Consider claim 2, Lempio further teaches a second relay device including a fourth Bluetooth module (see fig. 1 col. 2 lines 62-65); and at least one second wireless terminal including a fifth Bluetooth module, wherein the second (see fig.1 item 14a1), fourth (see fig.1 item 14a2), and fifth Bluetooth modules (see fig.1 item 42) structure a second piconet in which the fourth Bluetooth module is a master, and the second and fifth Bluetooth modules are slaves (see figs. 1, 2A and 2B col. 4 lines 19-32).

Consider claim 3, Lempio further teaches a second relay device including fourth and sixth Bluetooth modules, each of the fourth and sixth Bluetooth modules capable of performing a cable communication irrespective of which is a master or slave (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); at least one second wireless terminal including a fifth Bluetooth module; the second and fourth Bluetooth modules structure a third piconet in which the fourth Bluetooth module is a master, and the second Bluetooth module is a slave; wherein the fifth and sixth Bluetooth modules structure a third piconet in which the sixth Bluetooth module is the master, and the fifth Bluetooth module is the slave; and wherein the first, second, and third piconets structure a network (see figs. 1, 2A and 2B col. 4 lines 19-32).

Consider claim 14, Lempio teaches in a wireless network system constructed by a plurality of Bluetooth terminals, wherein the system comprises: a first relay device (see fig. 1 item 14a1) including (see fig. 2A item 30a) and second (see fig. 2A item 30b) Bluetooth modules, each of the Bluetooth modules performs a cable communication irrespective of which is a master/slave, wherein said first relay device is configured to be mounted on a first mobile aparatus (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one first wireless terminal (see fig. 2B item 12) including a third Bluetooth module, and in the method, the first and third Bluetooth modules communicate with each other on a first piconet in which the first Bluetooth module is a master, and the third Bluetooth module is a slave (col. 4 lines 19-24), the second Bluetooth module communicates with any one of the other Bluetooth modules on a second piconet (see fig. 1 item 20a and col. 4 lines 33-50).

Lempio does not explicitly show that the first Piconet and the other piconet structure a network, said network being configured to function independent of a host.

In the same field of endeavor, Hlasny teaches the first Piconet and the other piconet structure a network, said network being configured to function independent of a host (page 3 [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the first Piconet and the other piconet structure a network, said network being configured to function independent of a host, as taught by Hlasny, in order to provide an electronic device is disclosed that is adapted to

communicate with a first device network and to communicate with a second device that is part of a second device network.

Consider claims 4 and 17, Lempio further teaches the first and third Bluetooth modules communicate with each other with transmission electricity conforming to a class 2 or 3 (read on broadcast range of several meters, e.g. class 3 has the maximum range is 10 meters) of a Bluetooth standard (col. 1 lines 25-28).

Consider claims 5 and 18, Lempio further teaches the second, fourth, and fifth Bluetooth modules communicate with one another with transmission electricity conforming to a class 1 (read on high power mode, e.g. class 1 has a power up to 100 milliwatts compares to class 3 is 1 milliwatts) of a Bluetooth standard (col. 3 lines 60-65).

Consider claims 6 and 19, Lempio further teaches the fifth Bluetooth module includes means for restricting transmission electricity (col. 1 lines 25-28).

Consider claims 7 and 20, Lempio further teaches the second and fourth Bluetooth modules communicate with each other with transmission electricity conforming to a class 1 of a Bluetooth standard (col. 3 lines 60-65).

Consider claims 8 and 21, Lempio further teaches the fifth and sixth Bluetooth modules communicate with each other with transmission electricity conforming to a class 2 or 3 of a Bluetooth standard (col. 1 lines 25-28).

Consider claims 10 and 23, Lempio further teaches in the first relay device, the first and second Bluetooth modules are controlled by common control means (see fig. 2A col. 4 lines 33-41).

Consider claims 11 and 24, Lempio further teaches the first and second Bluetooth modules and the control means are connected together via a bus (see fig. 2A col. 4 lines 33-41).

Consider claims 12 and 25, Lempio further teaches in the second relay device, the fourth and sixth Bluetooth modules are controlled by common control means (see fig. 2A col. 4 lines 33-41).

Consider claims 13 and 26, Lempio further teaches the fourth and sixth Bluetooth modules and the control means are connected together via a bus (see fig. 2A col. 4 lines 33-41).

Consider claim 15, Lempio teaches the system comprises: a second relay device including a fourth Bluetooth module, said second relay device being configured to be

mounted on a second mobile aparatus (see fig. 1 col. 2 lines 62-65); and at least one second wireless terminal including a fifth Bluetooth module, and in the method, the second, fourth, and fifth Bluetooth modules communicate with one another on a second piconet in which the fourth Bluetooth module is a master, and the second and fifth Bluetooth modules are a slaves (see figs. 1, 2A and 2B col. 4 lines 19-32).

Lempio does not explicitly show that the first and second piconets structure a network, said network being configured to function independent of a host.

In the same field of endeavor, Hlasny teaches the first and second piconets structure a network, said network being configured to function independent of a host (page 3 [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the first and second piconets structure a network, said network being configured to function independent of a host, as taught by Hlasny, in order to provide an electronic device is disclosed that is adapted to communicate with a first device network and to communicate with a second device that is part of a second device network.

Consider claim 16, Lempio teaches the system comprises: a second relay device including fourth and sixth Bluetooth modules, and each of the Bluetooth modules performs a cable communication irrespective of which is a master/slave, wherein said second relay device being configured to be mounted on a second mobile aparatus (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one second wireless

terminal including a fifth Bluetooth module, and in the method, the second and fourth Bluetooth modules communicate with one another on a third Piconet in which the fourth Bluetooth module is a master, and the second Bluetooth module is a slave, the fifth and sixth Bluetooth modules communicate with each other on a third piconet in which the sixth Bluetooth module is the master, and the fifth Bluetooth module is the slave (see figs. 1, 2A and 2B col. 4 lines 19-32).

Lempio does not explicitly show that the first, second, and third piconets structure a network, said network being configured to function independent of a host.

In the same field of endeavor, Hlasny teaches the first, second, and third piconets structure a network, said network being configured to function independent of a host (page 3 [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the first, second, and third piconets structure a network, as taught by Hlasny, in order to provide an electronic device is disclosed that is adapted to communicate with a first device network and to communicate with a second device that is part of a second device network.

7. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lempio in view of Hlasny and further in view of Tuomela (U.S PUB. 2003/0235179 hereinafter, "Tuomela").

Consider claims 9 and 22, Lempio and Hlasny, in combination, fails to discloses an SCO link or an ACL link is established between the Bluetooth modules.

However, Tuomela teaches an SCO link or an ACL link is established between the Bluetooth modules (page 1 [0005]).

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of Tuomela into view of Lempio and Hlasny, in order to provide wireless relay networks also exist which, in effect, extend an operating range of a local RF system by using specific LPRF communication devices referred to as relay devices to interface with and provide communication between two or more user's communication devices.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Tuan Nguyen T.N
Examiner
Art Unit 2618

1-07-07
LANA LE
PRIMARY EXAMINER